**Things before the meeting – 11/11/2021**

# Cole et al 2009

The most important paper in your literature review is by Cole Elliot and Lindely 2009, who have industry-level data on emissions at the industry level and refer to the uk.

They say that estimating the wage premium related to dirty industry has never been done and it is difficult for the following reasons:

1. Lack of knowledge by employees and employers about the health effects of the pollutants associated with occupational exposure. Workers also have a psychological mechanism of denial
2. Occupational diseases can be compensated ex post. This reduces the compensation ex ante in terms of wage premium.
3. There can be differences in the perceptions of risk and also differences in mobility.

In any study about wage premia one must be aware that the raw data tend to show a correlation between wages and lower risk; as a consequence the assessment of wage premia entirely relies on the econometric specification.

They control for fatal and non fatal injury risk. They have data on the emissions of 21 pollutants that they aggregate according to toxicity.they use the UK environmental accounts. They recognize that it would be better to have emissions data at the plant level, in order to assign the correct level of exposure to pollution to each individual.

In order to weight they use threshold limit values (maximum levels of concentration that a worker can inhale in an 8 hour working day).

They use three measures of exposure:

1. Weighted emissions
2. Weighted emissions scaled by value added
3. Industry level weighted emissions divided by the number of firms in industry

They control for a lot of individual characteristics.

In order to estimate the value of statistical life they resort to the coefficient on industry level fatal risk. They find that the vsl is between 12 an d 19 million pounds, which is much higher than in the united states.

They find a positive and statistically significant coefficient on the pollution exposure variable, even controlling for fatal and non fatal risk.

# Mishra Smyth 2012

They look at the relationship between environmental regulations and wages.

They use an employer employee matched dataset from shangaii. They investigate whether firms the cost of pollution abatement to workers by lowering wages.

There is a strand of the literature about the willingness to pay for clean air, as refleceted in wage differences across different cities.

Their econometric specification is a mincer equation, in which the core regressor is a dummy variable related to whether a firm reports to have engaged in pollution abatement initiatives. The reasons why pollution abatement and wages should be related are two. First of all, firms may want to pass their abatement cost to workers. Second, workers do not ask for a wage premium if they work for a clean firm.

They instrument the dummy of interest by using how many times the firm updated its technology in the previous year and how much the firm spent on research and development in the previous year. They concede that the mincer equation has many problems related to endogeneity.

They find that the coefficient on the core regressor is negative and statistically significant.

**What is relevant about this paper is that they use firm level data to estimate a wage premium on pollution. Nevertheless, they do not have data on emissions, but just have data on whether the firm has invested in pollution abatement or not.**

# Cropper Arriaga Salinas 1979

They propose a method to assess air quality based on differences in wages across different cities. They show that the supply of labour increases with wages and with air quality in cities.

Policy makers need to find a way to price clean air. There are two methods. One is related to housing prices, the other is related to differences in wages.

You basically run a hedonic wage regression in which you place pollution in the city. The coefficient can be interpreted as the marginal willingness to pay for clean air.

They actually use median wages because they are not able to match workers with wages at the individual level. They only refer to so2.

They find that the coefficient on so2 is positive and statistically significant.

# Lavin Dresdner 2011

They estimate the implicit prices of the crime rate in Chile by using spatially differentiated price compensating differentials in the housing and in the labor markets.

There is an old idea in the economic literature according to which wages and housing prices tend to compensate for disamenities.